**Topic Two: Number Properties**

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| Number |  |
| Investigate index notation and represent whole numbers as products of powers of prime numbers [(ACMNA149)](http://ausvels.vcaa.vic.edu.au/Curriculum/ContentDescription/ACMNA149) | * Defining and comparing prime and composite numbers explaining the difference between them |
| Investigate and use square roots of perfect square numbers [(ACMNA150)](http://ausvels.vcaa.vic.edu.au/Curriculum/ContentDescription/ACMNA150) | * investigating square numbers such as 25 and 36 and developing square root notation * investigating between which two whole numbers a square root lies |

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| Lesson | Learning Intention | Activities |
| 1-2 | Factors and Multiples, key building blocks of Number Theory | Ex 3A, pg108(selected questions)  EX3B, pg 113(selected questions) |
| 2-3 | Some numbers can only be arranged into one type of rectangle.  Prime numbers are numbers that can only be arranged into one type of rectangle  Composite numbers are numbers that can be arranged into more than one type of rectangle | Activity 1: Theeratosthenes Sieve of Eratosthenes  Ex 3D pg 121(selected questions) |
| 4-5 | Powers leading up to Factor Trees/Prime Decomposition | Ex 3E pg 126(selected questions)  Ex 3F pg 130(selected questions |
| 6 | Numbers can be arranged into rectangular arrays. | Activity 2: Rectangular Numbers cont. |
| 7 | Some rectangles can be arranged in squares.  Square roots and square root notation. | Activity 3: Square Numbers  Ex 3G pg 136(selected questions) |
| 8 | Some numbers can be arranged into cubes  Cube roots and cube root notation. | Activity 4: Cube Numbers |
| 9 | Solving a problem by looking for a pattern | Squares on a chessboard (page 20) |
| 10 | Revising of content | Chapter review pg 169-173 |
| 11 | How much has been learnt | Test |